Lydon Kersting

kersting@princeton.edu — 551.427.1401

EDUCATION	*Princeton University* — expected June 2018

EDUCATION
Princeton University   expected June 2018
BSE Candidate, Mechanical and Aerospace Engineering
Certificate in Robotics & Intelligent Systems
Departmental GPA: 3.8; Cumulative GPA: 3.5

EXPERIENCE
Intern - National Aeronautics and Space Administration (NASA)   Summer 2016
- Designed Retention & Release Alignment & Assembly Device (RRAAD) - 6 degree-of-freedom tool to orient & assemble Retention & Release Mechanism in Orion Crew Module (CM) for Ascent Abort 2 (AA2) Flight Test
- Design approved by AA2 Project Team & head of Mechanical Systems Branch
- Devised laser tracking method to determine orientation of RRAAD in CM
- Wrote Excel Coordinate Transformation Program to convert Orion : global coordinates
- Programs used: PTC Creo, Nastran, Patran, Microsoft Excel

Princeton Undergraduate Research Intern   June 2015- February 2016
- Designed and performed experiments to examine the degradation of perovskite ($CH_3NH_2PbI_3$) solar cells under Sarah Jane White of the Harvard School of Public Health
- Bruker D8 X-Ray Diffraction measurements & Athena analysis of XANES/NEXAFS data
- Designed isolation chamber to seal out or introduce ambient air, water, or light to sample

Intern - American Museum of Natural History/ Columbia University   Summer 2014
- Researched/documented hundreds of minerals for Columbia University

Research Intern - Pascack Historical Society Museum   Summer 2011 - 2015
- Researched/documented chemicals of Civil War medical kit & local artifacts

PROJECTS
Space Debris Removal CubeSat - Independent Project   Academic Year 2016 - 2017
- Designing & fabricating CubeSat to clear space debris in Low Earth Orbit via balloon device
- Working in Princeton's Electric Propulsion & Plasma Dynamics Lab under Dr. Edgar Choueiri, Director of Princeton's Engineering Physics Program

NASA Revolutionary Aerospace Systems Concepts-Academic Linkage Competition 2017
- Project lead of Princeton Competitive Engineering prototyping ice-drill for use on Mars

Wind Turbine   Spring 2016
- Designed and analyzed 6" diameter, 10-blade wind turbine in Q-Blade
- Modeled turbine in Creo Parametric 5.0 and 3D printed using Cura
- Varied NACA airfoils, turbine diameter, blade thickness, twist, & chord length to approach Betz limit
- Tested power generation in wind tunnel between 0 - 30 m/s

Technical Team - Engineers without Borders   2015 - present
- Designed water pipeline, springbox, & reservoir tank in PTC Creo

Brown University Environmental Leadership Laboratory   Summer 2013
- Designed and constructed solar ovens & solar showers for developing nations
- Pitched plan to Brown University engineers and environmental scientists

ACTIVITIES
Women's Rugby, Princeton Competitive Engineering, Students for the Exploration & Development of Space, 3D Printing Club, Sustainable Energy & Development Scholars, Outdoor Action Excursion Leader, Religious Life Council, Aquinas Catholic Institute

SKILLS
X-Ray Diffraction: Bruker D8 Discover XRD, Powder XRD, Athena Data Processing
Lab Experience: Clean Room, Quality Assurance Laser Tracking, IR/NMR/UV Spectroscopy, Mass Spectrometry, ICPMS
Programming: Java, Python, MATLAB, Microscoft Excel, Nastran, Patran, LaTeX
Modeling: PTC Creo, 3D Printing
Additional: Advanced Spanish language proficiency

AWARDS
Princeton University Outstanding Work by Freshman Award, Bausch+Lomb Honorary Science Award, National Merit Finalist & Scholarship Recipient